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09/557,644	04/25/2000	Jin K. Song	1260-2001	9251

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EXAMINER
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WALSH, DANIEL I

ART UNIT	PAPER NUMBER
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2876

DATE MAILED: 03/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/557,644

Applicant(s)

SONG, JIN K.

Examiner

Daniel I Walsh

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4-25-00 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. Receipt is acknowledged of the Information Disclosure Statement received on 15 January 2002.

#### *Claim Objections*

2. Claims 5, 7-8, 10-11, 13-18, 23, and 24 objected to because of the following informalities:

Re claim 5, line 3: replace "the activation" with -- activation --.

Re claims 7-8, 10-11, and 13-18, line 2: Remove "the step of".

Re claim 23, line 2: Replace "the deliver" with -- delivery --.

Re claim 24, line 2: Replace "the state" with -- a state --.

Appropriate correction is required.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-13 and 16-17, 19, and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US 5,466,158), in view of Ho (US 6,064,855).

Smith teaches an interactive book device with a book 80 with illustrations and text (FIG. 1 and FIG. 2), a book holder adapted to accept the book, the holder having a reading surface 30 (FIG. 1 and FIG. 2) with a cartridge slot 54, a speaker 22, and power supply 46. Smith also teaches a cartridge to be inserted into the cartridge slot, the cartridge including stored audio related to the illustrations or text on the pages of the book though game cartridge 50 that "allows about 175 spoken words and 25 special sound effects" (col 5, lines 48+). This is interpreted to meet the limitations of claims 12 and 13, which include storing electronic equivalents of text and audio, and that the sounds are recorded into a memory space. Re claim 16, Smith teaches packing the electronic representations stored in the memory space using a chip within the cartridge through "The most economical and efficient choice appears to be to place a dedicated microprocessor containing a built-in program and sound generating capabilities in the game cartridge 50. The preferred embodiment uses a Texas Instrument 50 C19 speech processor/microprocessor, an eight-bit microprocessor with special built-in sound-generating circuitry. The chip contains a 32,000 byte mask ROM for program and sound storage. This allows about 175 spoken words and 25 special sound effects for each cartridge: sufficient capacity for several comic books" (col 5, lines 42+). It is understood that the packaging would occur after the storing of data, for ease of production and manufacturing. Re claim 17, it is understood that the cartridge is inserted into the book reader system as seen in FIG. 1.

Smith fails to specifically teach that some of the pages include magnetic signatures, a magnetic sensor on the reading surface of the book holder and a reading controller where the sensor detects magnetic signatures on the pages as they are turned by a user viewing the book, and that the controller interacts with the sensor to determine what pages are being viewed and to

retrieve and reproduce the sounds to the user through the speaker, corresponding to the pages being viewed.

Ho teaches that some of the pages include magnetic signatures through a plurality of magnetic field generators 75 that are mounted on the bottom sides of the tab members 131 of the pages. Ho teaches that the book holder has a reading surface with a magnetic signature sensor through FIG. 1 and magnetic field sensors 75 (FIG. 6) and column 5, lines 40+. Ho teaches that the magnetic sensor detects magnetic signatures on the pages as they are turned to determine what page is being viewed and to retrieve and reproduce audio representations corresponding to the pages being viewed, and playing them through a speaker through "Moreover, a plurality of magnetic field generators 75 are mounted on the bottom sides of the tab members 131 respectively. Therefore, when voice book 10 is closed, each of the magnetic field sensors 74 detects a specific magnetic field generated from the respective magnetic field generator 75 so that the audio means 30 will be deactivated and will not provide any speaking sound. However, when the voice book 10 is turned into a particular page sheet 13, that tab member 131 as well as the magnetic field generator 75 mounted thereon will be turned over, the magnetic field generated by the respective magnetic field generator 75 will not be sensed and the audio means 30 will react to broadcast the sound content with respect to that particular page sheet 13" (col 5, lines 43+).

Re claims 2, Ho teaches the magnetic signatures are attached to a specified location of the page, as seen in FIG. 6, where the field generators 75 are mounted on the bottom side of tabs 131.

Re claim 3, Ho teaches that the magnetic sensors comprise one or more individualized reading elements pre-aligned on the reading surface to correspond with magnetic signatures at their specified locations through FIG. 1, FIG. 6, FIG. 5, and FIG. 7, where the magnetic sensors replace the signal emitters and receivers 71 and 72 in a preferred embodiment.

Re claim 4, the reading surface is flat, as seen in FIG. 1.

Re claim 5, it is understood that the power supply taught above is coupled with the elements of the device (directly or indirectly), and also can control the activation and de-activation of the book holder, since if there is no power (energy) in the battery, it will cause the book holder to be de-activated, and vice versa.

Re claim 6, it is understood that location of the magnetic signatures is detected by the sensors as taught above, and that audio is correlated with the matching signatures.

Re claim 7, it is also understood that the magnetic signatures of the pages are aligned with the reading elements when the book is inserted into the holder, since otherwise, it would not be able to function effectively.

Re claim 8, it is understood that once the book is placed in the holder, it can be read and the pages can be turned, and hence the interactive part of the device can come into play.

Re claim 9, it is understood that when the pages are turned, the magnetic signatures identify the pages/text/illustration since the appropriate audio is conveyed to the user.

Re claims 10-11, it is understood that the audio to be played to the user is first retrieved and then audibly played to the user, corresponding to the pages being viewed by the user.

Re claim 19 and 22, the limitations of this claim have been addressed above, except for the added limitation that the system has a bracket coupled to the reading surface adapted to hold

the book in place while the pages are turned, that there is a book support surface adjoined to one side of the reading surface to support the pages as they are viewed, and that the reading surface and book support surface are adjoined by a means to fold in a manner to allow for easy carrying. Smith teaches a bracket type device to hold the book in place through clamp 25,26 (FIG. 3). Though not referred to as a bracket, it meets the functionality of a bracket as it holds the book in place while the pages are turned. At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to use a bracket in view of the support means taught by Smith, as a matter of design variation since both perform the same function, and it appears there is no advantage to have a bracket, or that it serves a purpose that the clamp means of Smith cannot meet. Further, Smith teaches a book support surface through 30, in figure 2, where surface 30 supports a portion of the book while being adjoined to the reading surface where the comic book is being read from in FIG. 3. Finally, Smith teaches that the reading surface and support surface are adjoined to allow for folding to allow surfaces to meet for ease of carrying through FIG. 1 and FIG. 2 which shows the system in the open and closed position, where the book support surface is interpreted as surface 30, and the reading surface is interpreted as the surface where comic book 80 in FIG. 2 rests.

Re claim 20, the claim limitations have been discussed above with respect to claim 3.

Re claim 21, both the reading surface and book support surface are flat as seen in FIG. 2

Re claims 25-28, these limitations are met by the cartridge 50, of Smith. It is understood that a cartridge has pins to be inserted into the device to communicate, and that the microprocessor/chip stores the representations through its memory space (col 5, lines 28-51, and it has been taught above that the cartridge stores the sounds and text.

At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Smith with those of Ho.

One would have been motivated to do this to create an interactive device that relies on magnetic signatures as opposed to the pressure detection means taught by Smith, since it is well known that pressure sensitive buttons are inconvenient and are susceptible to wear. Therefore using magnetic signature detection to determine the page and the necessary sound to be played is more convenient, accurate and robust, and can even be used by those with limited sight or physical abilities who may be unable to read conventional books or operate pressure sensitive reading devices.

Though neither Smith or Ho specifically teach a reading controller that interacts with the sensors to determine pages be viewed and to retrieve audio on the cartridge corresponding to the pages and to reproduce the sound through the speaker for the user, it has been discussed above that these means have been taught without the use of a specific reading controller. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a reading controller or functionally equivalent device, since it has been held that omission of an element and its function in a combination where the remaining elements performs the same functions as before involves only routine skill in the art. In re Karlson, 136 USPQ 184. Further, it has been held that the recitation that an element is 'adapted' to perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as modified by Ho, as applied to claim 1, and further in view of Eberhard et al. (US 6,331,867).



The teachings of Smith and Ho have been discussed above.

Smith and Ho fail to specifically teach or fairly suggest that electronic audio and text is in a digital format.

Eberhard et al. teaches this limitation through "The device 30 also includes an audio speaker 44 (FIG. 5) for outputting digital audio signals, and includes an infrared (IrDA) transceiver 46 (FIG. 5) for communicating with kiosks, PC's, other infrared devices, or another hand-held device" (col 4, lines 3+). At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Eberhard with those of Smith and Ho.

One would have been motivated to do this in order to have a higher quality of sound for the enjoyment of the user.

Though Eberhard et al. teaches that the text is digital, it would have been obvious to have the audio content digital as well, since both are in fact audio components of the book being read, and therefore one would want the quality of the text and other audio to be of equally high quality for the enjoyment of the reader.

5. Claim 15 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as modified by Ho, as applied to claim 1, and further in view of Tan (US 5,897,324).

The teachings of Smith and Ho have been discussed above.

Smith and Ho fail to specifically teach the use of memory with addresses where the equivalent representations are sorted and stored.

Tan teaches "In one of the preferred embodiment, the universal interfacing adapter 100

can be standardized as a cartridge to receive different multimedia books 110. Each time a multimedia book 110 is inserted into the adapter 100, a book number is transmitted to the storage and process means 115. The storage and process means 115 verifies that the book number is valid and a special section of the memory space is allocated for the inserted multimedia book 110. As the user turns to a page, a page number is transmitted via the interfacing adapter 100 and the page number is used as an address to point specific segments of memory in the storage and process means 115 and ready to respond to different kinds user input, e.g., pushed buttons, audio messages, etc. Depending on the combination of book numbers and page numbers, the storage and process means 115 may also execute different set of commands or instructions to perform different types of processing or output activities corresponding to different user input" (col 4, lines 42+). Further, at the time the invention was made, it was well known to store memory in unique addresses (such as on computers and other electrical devices) as a way to organize and effectively retrieve and sort data. Therefore, using memory addresses for the data storage of claim 15, would have been an obvious expedient.

6. Claim 18 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as modified by Ho, as applied to claim 1, and further in view of Chombo (US 6,313,828).

The teachings of Smith and Ho have been discussed above.

Smith and Ho fail to specifically teach downloading a duplicate of the electronic equivalent representations stored in the first electronic memory space into a second space housed in the reader.

Chombo teaches an electronic book with "a RAM memory to store a part or all of the information of a compact disc being read, and also to store the information from a remote source, said RAM memory comprising a first part corresponding to memory circuits of said electronic book, and a second part corresponding to support circuits for the maintenance of the information contained in said RAM memory; a hard disc to store information and/or partially or wholly download the files conforming said displayed book as well as the proper operation of said electronic book, and to store a part of a master program, which also is contained in a ROM type memory" (col 13, lines 40+). This is also interpreted to meet the limitations of claim 30, which include communicating with a second electronic memory within the system.

At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Chombo with those of Smith and Ho.

One would have been motivated to do this in order to have a way of caching and reading/storing ahead of the book, in order to present a interactive reading experience for the user without possible delays or errors.

Though Chombo doesn't teach that the first electronic equivalent is embodied by a cartridge with a chip, at the time the invention was made, it would have been obvious to use a cartridge with a chip for data storage, since it is well known that cartridges can store data just as well as other means, and that cartridge means are more robust and suited for portable applications.

7. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as modified by Ho, as applied to claim 19, and further in view of Sharpe et al. (US 5, 851,119).

The teachings of Smith and Ho have been discussed above.

Smith and Ho fail to teach an adjustable volume.

Sharpe et al. teaches a volume control through FIG. 1 "Control switches include an on-off switch and others that permit adjustment of various parameters, including, for example, volume" (col 3, lines 2+).

At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Smith and Ho with Sharpe et al.

One would have been motivated to do this to provide an adjustable volume means for the convenience and enjoyment of the user, whereby volume can be adjusted depending on the conditions and preference of the individual user.

8. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as modified by Ho, as applied to claim 19, and further in view of Rallison et al. (US 5,991,085).

The teachings of Smith and Ho have been discussed above. Also, Smith teaches a plurality of indicating LEDS through LEDs 64, even though Smith is silent to if one is used as a power indicator. However, it is well known and understood in the art that LEDs are used to indicate states to the user (such as power).

Smith and Ho fail to teach an LED to indicate the state of the book system (on or off).

Rallison et al. teaches an LED power indicator 48.

At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Smith with Ho and Rallison et al.

One would have been motivated to do this to provide a visual way to alert the user of the

power status of the system, since LED power indicators are a conventional way of doing this, and are well known in the art.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Cummings (US 4,990,092), Munyan (US 5,761,485), Haas et al. (US 5,707,240), Ohara et al. (US 6,297,812), and Shiina (JP 357147767A).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ***Daniel Walsh*** whose telephone number is (703) 305-1001. The examiner can normally be reached between the hours of 7:30am to 4:00pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (703) 305-3503. The fax phone numbers for this Group is (703) 308-7722, (703) 308-7724, or (703) 308-7382.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [daniel.walsh@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set for the in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

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D. Walsh

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

DW

3-18-02

THIEN M. LE  
PRIMARY EXAMINER